

ABSTRACT OF THE DISCLOSURE

Optical wavelength control method and apparatus which are capable of controlling an optical wavelength of a light source with a central wavelength which is uncertain and unstable at nanometer order is disclosed. In the optical wavelength control apparatus, the control target light entered from the variable wavelength light source is scanned at a prescribed period and optical pulses having a phase corresponding to the optical wavelength of the control target light are obtained. Then, a phase difference between a phase of the optical pulses and a phase corresponding to a reference optical wavelength is detected, and the variable wavelength light source is controlled by feeding back the phase difference to the variable wavelength light source such that the optical wavelength of the control target light is controlled by an optical frequency pulling with respect to the reference optical wavelength according to the phase difference.